CLAIMS:

1. A water-soluble copolymer composition comprising the formula of I:

$$\text{-[B–co–C]-}$$

wherein B is a nonionic polymer segment formed from the polymerization of one or more ethylenically unsaturated nonionic monomers;

C is a cationic polymer segment formed from polymerization of one or more ethylenically unsaturated cationic monomers,

the molar % ratio of B:C is from 99:1 to 1:99;

and

the water-soluble cationic copolymer is prepared via a water-in-oil emulsion polymerization technique that employs at least one emulsification surfactant consisting of at least one diblock or triblock polymeric surfactant wherein the amount of the at least one diblock or triblock surfactant to monomer is at least about 3 :100 and wherein;

the water-in-oil emulsion polymerization technique comprises the steps:

preparing an aqueous solution of monomers,

adding the aqueous solution to a hydrocarbon liquid containing surfactant or surfactant mixture to form an inverse emulsion,

causing the monomer in the emulsion to polymerize by free radical polymerization at a pH range of from about 2 to less than 7; and wherein said copolymer having a Huggins' constant (k') is greater than 0.5; and said copolymer having a storage modulus (G') greater than 50 Pa.

2. The composition of claim 1 wherein B is selected from the group consisting of acrylamide, methacrylamide; *N*-alkylacrylamides, *N,N*-dialkyl-acrylamide; methyl methacrylate, methyl acrylate; acrylonitrile; *N*-vinyl methylacetamide; *N*-vinylformamide; *N*-vinylmethyl formamide; vinyl acetate; *N*-vinyl pyrrolidone; and mixtures of any of the foregoing.

3. The composition of claim 1 wherein C is selected from the group consisting of diallyldialkylammonium halides, (meth)acrylates of dialkylaminoalkyl compounds, such as dimethylaminoethyl (meth)acrylate, diethylaminoethyl (meth)acrylate, dimethyl aminopropyl (meth)acrylate, 2-hydroxydimethyl aminopropyl (meth)acrylate, aminoethyl (meth)acrylate, and the salts and quaternaries thereof; the N,N-dialkylaminoalkyl(meth)acrylamides, such as N,N-dimethylaminoethylacrylamide, and the salt and quaternaries thereof and mixtures of any of the foregoing.

4. The composition of claim 1 wherein the diblock or triblock surfactant is a copolymer based on polyester derivatives of fatty acids and poly[ethyleneoxide].

5. The composition of claim 1 wherein diblock or triblock surfactant to monomer ratio is at least about 4:100.

6. The composition of claim 1 further comprising cellulose fiber.

7. A method of making a cellulose fiber composition which comprises adding to a cellulose pulp slurry the water-soluble cationic copolymer of claim 1.

8. The composition of claim 1 wherein the emulsification surfactant consists of a blend of a polymeric surfactant comprising one or two polymeric components derived from oil-soluble complex monocarboxylic acid and a water-soluble component derived from polyalkylene glycol, and sorbitan monooleate; and 2,2'-azobisisobutyronitrile is employed as the free radical initiator.

9. The composition of claim 8 wherein the surfactant system has a combined Hydrophilic-Lipophilic Balance of less than 8.

10. The composition of claim 9 wherein the diblock or triblock surfactant is a copolymer based on polyester derivatives of fatty acids and poly[ethyleneoxide].

11. The composition of claim 1 wherein the ratio of B:C is about 99:1 to about 50:50.

12. The composition of claim 11 wherein the ratio of B:C is about 95:5 to about 50:50.

13. The composition of claim 1 wherein k' is greater than 0.6.

14 The composition of claim 1 wherein G' is greater than 75.

15. The water soluble copolymer composition of claim 1 wherein the copolymer further comprises an anionic polymer segment, "A", wherein A is an anionic polymer segment formed from polymerization of one or more ethylenically unsaturated anionic monomers; and the minimum amount of A is 1% of the total amount of monomer used to form the polymer.

16. The composition of claim 15 wherein B is selected from the group consisting of acrylamide, methacrylamide; *N*-alkylacrylamides, *N,N*-dialkyl-acrylamide; methyl methacrylate, methyl acrylate; acrylonitrile; *N*-vinyl

methylacetamide; *N*-vinylmethyl formamide; *N*-vinylformamide; vinyl acetate; *N*-vinyl pyrrolidone; and mixtures of any of the foregoing.

17. The composition of claim 15 wherein C is selected from the group consisting of diallyldialkylammonium halides, (meth)acrylates of dialkylaminoalkyl compounds, such as dimethylaminoethyl (meth)acrylate, diethylaminoethyl (meth)acrylate, dimethyl aminopropyl (meth)acrylate, 2-hydroxydimethyl aminopropyl (meth)acrylate, aminoethyl (meth)acrylate, and the salts and quaternaries thereof; the N,N-dialkylaminoalkyl(meth)acrylamides, such as N,N-dimethylaminoethylacrylamide, and the salt and quaternaries thereof and mixtures of any of the foregoing.

18. The composition of claim 15 wherein A is selected from the group consisting of the free acids and salts of acrylic acid; methacrylic acid; maleic acid; itaconic acid; acrylamidoglycolic acid; 2-acrylamido-2-methyl-1-propanesulfonic acid; 3-allyloxy-2-hydroxy-1-propanesulfonic acid; styrenesulfonic acid; vinylsulfonic acid; vinylphosphonic acid; 2-acrylamido-2-methylpropane phosphonic acid; mixtures of any of the foregoing.

19. The composition of claim 15 wherein the diblock or triblock surfactant is a copolymer based on polyester derivatives of fatty acids and poly[ethyleneoxide].

20. The composition of claim 15 wherein diblock or triblock surfactant to monomer ratio is at least about 4:100.

21. The composition of claim 15 further comprising cellulose fiber.

22. A method of making a cellulose fiber composition which comprises adding to a cellulose pulp slurry the water-soluble cationic copolymer of claim 15.

23. The composition of claim 15 wherein the emulsification surfactant consists of a blend of a polymeric surfactant comprising one or two polymeric components derived from oil-soluble complex monocarboxylic acid and a water-soluble component derived from polyalkylene glycol, and sorbitan monooleate; and 2,2'-azobisisobutyronitrile is employed as the free radical initiator.

24. The composition of claim 23 wherein the surfactant system has a combined Hydrophilic-Lipophilic Balance of less than 8.

25. The composition of claim 24 wherein the diblock or triblock surfactant is a copolymer based on polyester derivatives of fatty acids and poly[ethyleneoxide].

26. The composition of claim 15 wherein the minimum amount of each of A, B and C is 5%.

27. The composition of claim 26 wherein the minimum amount of each of A, B and C is 7%.

28. The composition of claim 15 wherein k' is greater than 0.6.

29. The composition of claim 15 wherein G' is greater than 75.